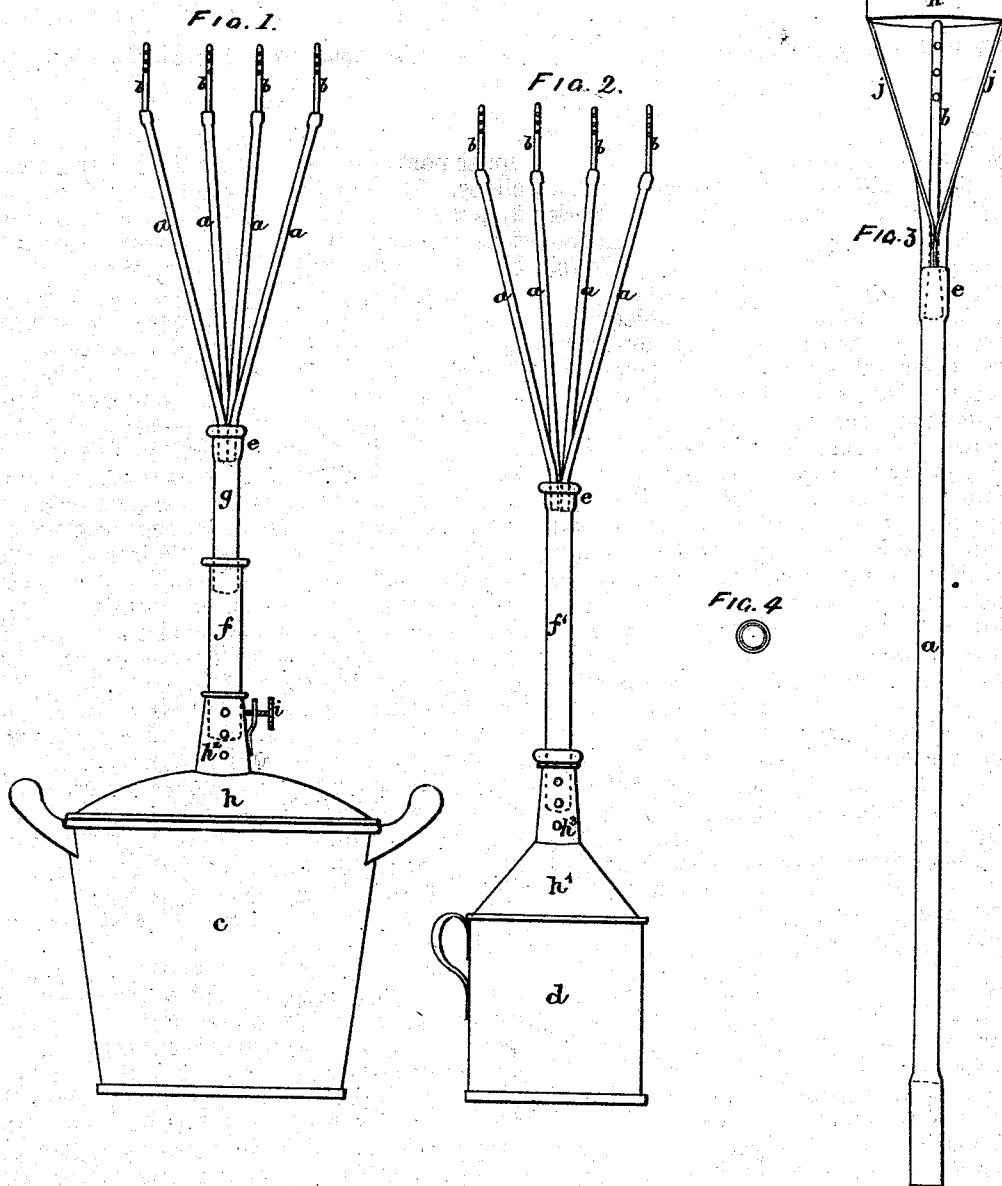


J. M. STANLEY & H. JAMES.
Cow-Milkers.

No. 154,811.

Patented Sept. 8, 1874.



Witnesses.

W. T. Shepherdson.
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UNITED STATES PATENT OFFICE.

JOHN MARTIN STANLEY AND HENRY JAMES, OF SHEFFIELD, ENGLAND.

IMPROVEMENT IN COW-MILKERS.

Specification forming part of Letters Patent No. **154,811**, dated September 8, 1874; application filed July 24, 1874.

To all whom it may concern:

Be it known that we, JOHN MARTIN STANLEY and HENRY JAMES, of Sheffield, York county, England, have invented certain Improvements in Appliances for Milking Cows, of which the following is a specification:

Our present invention has for its object improvements in the present appliance for milking cows, which will save time and labor, and secure a more cleanly process of milking.

In order that our said invention may be more clearly and more fully understood, and be more readily performed, we now proceed to explain the same, with the aid of the accompanying drawing, which forms part of this specification, reference being made thereto by the numerals and letters marked thereon, and which reference applies to each figure of the said drawing where the same index numerals and letters appear.

Figure 1 is an elevation of our improved milking appliance or apparatus fitted in the neck of a domed milk-pail. Fig. 2 is an elevation of a similar apparatus fitted in the neck of a milk-can. Fig. 3 is a full-size elevation of a small flexible tube, and its metallic tube for insertion in the cow's teat, which metallic tube is hereinafter called the "insertion-tube," also showing our improved elastic bands and loop for holding the said insertion-tube in place during the milking process. Fig. 4 is a full-size view of the lower end of the said small flexible tube, showing a short metallic tube or lining fitted therein.

In carrying our present invention into practice, we propose to use flexible tubes *a*, with metallic insertion-tubes *b*. The four flexible tubes *a* are inserted and secured in one end of a larger tube, having an internal cavity or common channel large enough to receive therein, and convey to the milk-pail *c* or can *d*, (hereinafter called receiving-vessels,) the four streams of milk from the four teats of the cow through the four flexible tubes *a*. This common channel may be made of any suitable material, either flexible or rigid, or partly of each, and be arranged to slide in the neck *h*² *h*³ of the receiving-vessel. The lower part *f* of the said common channel (shown in Fig. 1) is formed of metal, and in which part *f* the

upper part *g*, made of vulcanized caoutchouc, slides. The common channel *f'* (shown in Fig. 2) is wholly of vulcanized caoutchouc in one tube, the lower end of which slides in the neck *h*³ of the milk-can *d*, and is provided with a free elastic ring, *i*, fitting sufficiently tight to support the tube *f'*, and prevent its sliding down in the neck of the receiving-vessel below the point at which it is fixed or placed.

To prevent dirt or other impurities from passing into the receiving-vessels during the process of milking, we fit such vessels with a top, *h* *h*¹, or a movable lid or cover, by preference in the form of a dome, which top or cover has, in or near its center, a neck, socket, or nozzle, *h*² *h*³, in which the lower end of the common channel slides; or the top or cover may be fitted with two necks, sockets, or nozzles, to receive a common channel from two cows at the same time, so that the milk passes from the cow or cows to the receiving-vessel without exposure, and consequently free from admixture with any foreign matter whatever.

The common channel (shown at *f* *g*, Fig. 1) is lengthened or shortened, at pleasure, by sliding the lower or metallic tube *f* in the neck *h*¹ of the top or cover *h* of the receiving-vessel, and fixing such tube *f* at the required distance or length by a set-screw, *i*, fitted in or to the neck *h* of such top or cover.

In order to prevent the insertion-tubes *b* from sliding or dropping out of the teats of the cow by any motion of the latter, or otherwise, during the process of milking, we secure the said insertion-tubes in or to the teats by means of elastic bands or cords *j*, one end of which is attached to the root or lower part of such insertion-tubes, and having attached to their upper parts or ends an elastic loop or circular band or cord, *k*, of a suitable size and strength to grasp the teat with just sufficient pressure to hold the insertion-tubes *b* in place.

Our improved apparatus is self-acting after being attached to the cow, and the milking process occupies less time than usual, especially when two cows are milked into the same receiving-vessel at the same time.

Having thus fully described the nature of our said invention, and the method of per-

forming the same, we wish it to be understood that we do not claim the flexible tubes *a*, nor the insertion-tubes *b*, *per se*; but

We claim as our invention, and desire to secure by Letters Patent—

1. The sliding elastic ring *v*, for regulating the length of the apparatus.
2. The insertion-tubes secured in position by the teat-bands and their connecting straps

or cords, substantially as herein described and shown.

JOHN MARTIN STANLEY.
HENRY JAMES.

Witnesses:

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